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ON THE LOCOMOTION OF A SEA ANEMONE (METRIDIDIUM MARGINATUM).¹

J. F. McCLENDON.

Last winter while studying some animals in the marine aquaria of the University of Pennsylvania I noticed that the anemones, after being placed at the bottom of an aquarium, would creep up the side of the glass to a more favorable position. Their method of progression is similar to the ordinary creeping of a snail,² con-

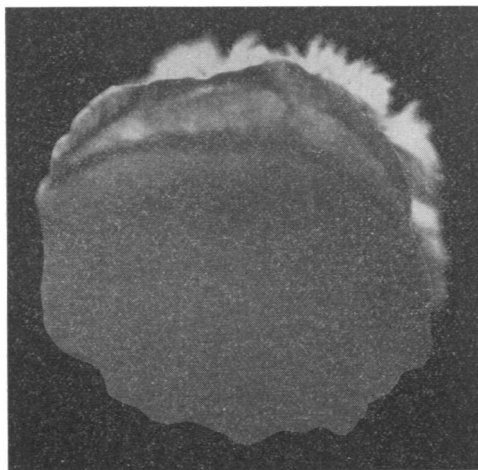


FIG. 1. *Metridium marginatum* seen through the glass, up which it is creeping. The lower side of the photograph has been outlined.

sisting of a succession of waves that travel from behind forward, but in the anemone the waves are larger and not so rapid or regular. The accompanying photographs were taken of an anemone creeping up the side of an aquarium, with its distal end inclined forward, probably to test the water into which it was advancing. The undulations of the foot progress in the direction of locomotion. If the functionally posterior end of the

¹ Contribution from the Zoölogical Laboratory of the University of Pennsylvania.

² For a more complicated form of locomotion in some snails see A. J. Carlson : "The Physiology of Locomotion in Gasteropods," BIOL. BULL., Vol. 2, January 1905, pp. 85-93.

foot be watched closely it will be seen to let go at several points (below in Fig. 1) and slip forward. This contraction is carried forward and on reaching the center of the foot, the contracted portion rises up from the glass, forming a wave that deepens as



FIG. 2. *Metridium marginatum* about half a minute later than Fig. 1.

it approaches the "anterior" end (Fig. 2, above). On reaching the "anterior" edge the wave is retarded by the firmer attachment of the edge, which releases locally, breaking the wave into segments (Fig. 1, above). A wave requires about a minute to traverse the foot of the anemone, and before it has disappeared, another commences.

I threw a number of anemones into an aquarium to observe their actions. They threw out acontia, which caught hold of any solid near them and contracted until some portion of the foot touched the object and caught hold. One anemone sinking to the bottom and resting on its tentacles contrived to right itself by suddenly contracting and expelling water from its mouth. I observed this once or twice subsequently, but rather think it a coincidence than a common reflex.

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